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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,433	11/20/2003	Jay Clifford Sinnett	MIC-47 (P50-0130)	9646
22827	7590	09/16/2004	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			KWOK, HELEN C	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/718,433

Applicant(s)

SINNETT, JAY CLIFFORD

Examiner

Helen C. Kwok

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/3/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-19 are objected to because of the following informalities. Appropriate correction is required.

In claim 1, line 11, the phrase "a selected" should be changed to - the selected -.

In claim 3, line 3, the word "or" should be changed to – of --.

In claim 4, line 2, the word "signals" should be changed to – signal --.

In claim 8, line 15, the phrase "a selected" should be changed to – the selected -.

In claim 10, line 3, the word "or" should be changed to – of --.

In claim 11, line 3, the word "signals" should be changed to – signal --.

In claim 13, line 1, the phrase "selected of" should be deleted. In line 2, the word "assemblies" should be changed to – portions --.

In claim 14, line 15, the phrase "a selected" should be changed to -- the selected

--.

In claim 16, line 3, the word "or" should be changed to – of –

In claim 17, line 3, the word "signals" should be changed to – signal --.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0020299 (Freakes et al.) in view of U.S. Patent 6,662,642 (Breed et al.).

Freakes et al. discloses a pressure monitor SAW device comprising, as illustrated in Figures 1-4B, a substrate 7 with at least one acoustic wave resonator X configured to provide an electrical output signal indicative of an associated physical parameter; a casing assembly 2,5 for providing a sealed package around the substrate and components wherein at least a portion 5A of the casing assembly made of metal forms a recessed surface area capable of flexing. (See, page 2, sections 0025 to 0028). The only difference between the prior art and the claimed invention is a projection provided on and extending from a selected location on the substrate. Breed et al. discloses a vehicle wireless sensing system comprising, as illustrated in Figures 8A-8B, a projection 123 on a substrate 24 of a SAW device. (See, column 30, line 66 to column 31, line 15). It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of including a projection as suggested by Breed et al. to the substrate of Freakes et al. to provide a force exerted onto the projection to create a pressure on the SAW device such that the increased pressure changes the time delay or natural frequency of the SAW wave traveling on the surface of material or affect the magnitude of the returned signal. (See, column 31, lines 7-15).

With regards to claims 2-4 and 7, Freakes et al. further discloses two additional acoustic wave resonators Y,Z to provide signals indicative of pressure and temperature;

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an antenna for transmission; and the substrate is of quartz. (See, page 2, sections 0025-0026 and 0029).

With regards to claims 5-6, Breed et al. does not explicitly disclose how the projection is formed or attached to the substrate. However, it would have been obvious to an artisan in the art to have recognize the well know methods and techniques in the art of forming or attaching elements, such as photolithography or adhesive.

With regards to claims 8-19, the claims are commensurate in scope with claims 1-7 and are rejected for the same reasons as set forth above. Furthermore, Freakes et al. teaches the SAW device is used in a tire assembly; a flat indentation area formed on a second casing portion (i.e. lid) of the casing assembly. Although the references do not explicitly teach the parameter (dimensions of the flat indentation area of claim 12), it would have been obvious to an artisan to have set such test characteristics without departing from the scope of the invention since this would involve only routine skills and experimentation in the art.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

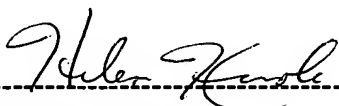
The references cited are related to pressure or temperature sensor with a vehicle.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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Helen C. Kwok  
Art Unit 2856

hck  
September 13, 2004